LARGE-SCALE HERBICIDE

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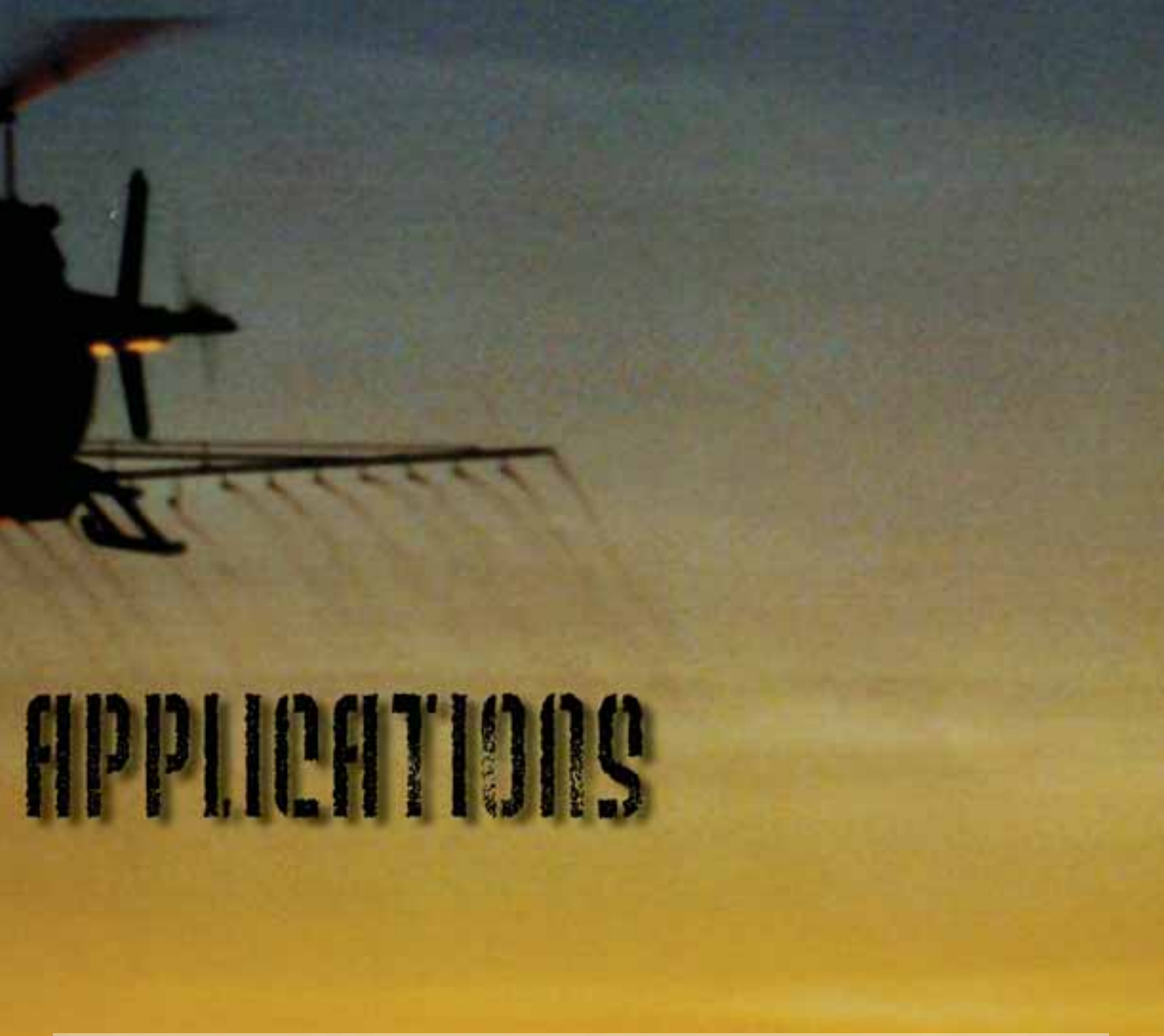
Large-scale herbicide applications may be a mystery – even intimidating – to landowners. However, forest landowners who want to have herbicide work done on their property may be surprised how easy the process can be. Whether it is how to contract the work or what to expect, this article is aimed at answering a few of those questions. Contracting spray work on your property may be an answer to accomplishing some of your forestry management objectives.

When considering an herbicide spray program on your property, the first step is to identify the need you have and start planning now. Getting your work completed takes time, preparation, objectives, and a goal. If your intentions are to spray, start making arrangements immediately. Herbicide applicators start booking work early in the year, January 1. The sooner you contract with an applicator, the sooner your work will be completed.

TYPES OF TREATMENTS

There are several different types of treatments that landowners can contract application for on their property. Herbaceous weed control is sprayed in the spring of the year to control broadleaf weeds and grasses in newly planted plantations. Generally, the first spring after planting is when herbaceous weed control is applied. Sometimes landowners will do another spring treatment in the second growing season to continue weed control. Site preparation is the most common application that is contracted in forestry. Site prep is after the trees have been clear-cut and the application is aimed at controlling hardwood trees and waxy competition. These treatments start in mid-June and end at leaf drop. Release treatments begin as early as July 15 and also stop at leaf drop. Release treatments control hardwood trees after planting if a site prep treatment was not done



APPLICATIONS

prior to planting. Mid-rotation treatments are sprayed on sites where hardwood competition is impacting the growth of older stands. Both release and mid-rotation treatments are either over the top of pines or under the canopy.

All of these applications are based upon the type of pines that will be planted or have been planted. The type and amount of herbicide is then determined by the applicator in coordination with the landowner and the landowner's forester. If the landowner is contracting directly with the applicator, then the applicator makes the best recommendation for the site, which is called a "site prescription." The site prescription consists of varying amounts of herbicides used in specific combinations to target the competition.

TIMING

The spray season for application kicks off in early February with herbaceous weed control. These treatments will run until mid-May. Early site preparation starts June 15. These tracts were cut earlier and the vegetation is fully sprouted. August 1 is when the late session begins for site prep. As well, release spraying starts August 15 and overlaps with late site prep. Between the two, they will last until leaves on hardwoods begin to drop. This is the time when the majority of tracts in forestry are sprayed. It is essential to have your plan together early in the season. There are fewer acres that are sprayed early, and the window is greater in terms of timing to have your tract sprayed. Applicators will book work as early as possible to ensure a completed job. Contracting your work later in the year puts your tracts behind other landowners who booked early in the season. If you know following a clear-cut that your intentions are to spray, start working with your forester or applicator to ensure your site gets sprayed.

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LARGE-SCALE HERBICIDE APPLICATIONS

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EQUIPMENT

Large-scale applications consist of helicopters and skidders. The majority of land sprayed in forestry in the southeastern United States is by helicopter. Fixed wing aircraft are not used in forestry – only helicopters! Also, skidders or rubber-tire tractors are the work horses for ground applications. Ground backpack crews are utilized in certain situations for large-scale applications. Contrary to popular belief, helicopters spray more acres and tend to be the cheapest per acre for application vs. a ground backpack crew. The reason is production. A helicopter can spray up to 500 acres on a good spray day. A ground skidder can produce around 75-90 acres per day; a large backpack crew can only spray up to 50 acres per day. Production is the driver when determining costs. However, a ground crew may be needed where a helicopter cannot go, and smaller sections that have sensitive areas will require a hand crew. But overall, the helicopter is the main application vehicle in the forestry industry.

PRODUCTION

Along with helicopters comes an immense amount of coordination on the ground. The application trade is a very fluid environment. Weather affects the business every day, with rain and wind speed the two most important factors in getting work completed. In years of hurricane activity, production can be impacted greatly. Most hurricanes occur in the fall of the year. Therefore, hurricane season coincides with late-season spraying which is when the bulk of the acres are treated. That's a good reason to have your property scheduled for an early treatment starting June 15. It not only helps you to avoid bad weather delaying your application, but it also opens up your window for burning. If you are planning to burn after your site prep treatment, earlier sprayings are always better. You have more time throughout the growing season to burn your site after the spray job.

With the amount of acres that are sprayed in a single season, one of the most crucial factors of achieving a successful spray job is coordination and information exchange. When tracts are contracted, other tracts in the general area are lumped together to spray during the same timeframe. A logistics coordinator plans the routes through the area and picks up as many tracts as possible. This allows the crews to be more productive.

WATER SOURCE

The water source for both aerial and ground applications come from local water authorities, with permission granted prior to application. Most crews are familiar with local water sources, but sometimes general information may be needed on a local water authority, in which case the area manager will ask the landowner. With the amount of water needed to spray a site, water sources will be identified well before the application takes place. The need for water sources has become more vital in the application industry due to the ensuing drought. Although some water authorities have restricted amounts that they allow the agricultural business to access, most are aware of the need for water associated with application and are easy to work with. Once the drought subsides, water sources should return to normal. If the tract is in an area where water is difficult to obtain, alternate sources further away will be identified.

MAPS

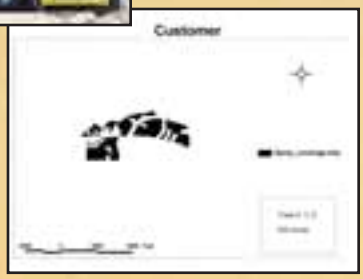
Applicators work off maps that landowners provide. The area manager visits the site ahead of the crew, writing the prescription for herbicides and obtaining all the necessary site information. The crew and pilot rely solely on the information that is provided to them. Therefore, the better the information, the smoother the job will flow. Good aerial maps and photos are needed, with areas delineated by lines. GPS points are required to find the tract by both air and ground. As well, if certain areas on the tract should not be sprayed, it is important to have those marked on the map. Looking at a tract from the air is completely different than looking at it from the ground. Any sensitive areas should be marked on the map, such as adjacent crop fields, food plots, houses, groves of oaks, ponds, anything and everything that needs to be avoided by the application. Putting in fire lanes prior to spraying is always helpful but not necessary.

LAT/LON

The latitude and longitude of a tract determine how it is found. The pilot will fly straight to the tract, waiting for the batch truck and crew to arrive. During that time, he can fly the tract and look for anything out of the ordinary, and ask the landowner about it before starting the job. As well, the crew finds the tract by the Lat/Lon coordinates. The area manager ensures the accuracy of these points when visiting the site prior to the crew's arrival.

GPS

Sophisticated GPS (global positioning systems) are employed by both helicopters and skidders for tracking spray jobs. This accomplishes several goals. First, it identifies and confirms the site to be sprayed. The Lat/Lon is provided before a spray job is matched to the equipment on board to ensure the accuracy of the location. Second, a GPS map is provided to the landowner after the spray job, showing the pattern of application and allowing the landowner to see the areas of their property that were sprayed. If certain sensitive areas were to be left out, the landowner can see firsthand that they were not sprayed. The GPS also guides the pilot or operator throughout the tract to ensure an accurate application.



WATER BARS

One important consideration when having aerial applications is that the water truck have access to the site. While water bars are extremely important for erosion control on some tracts, they are often difficult for the batch trucks to clear. Batch trucks, which carry water to the site, are usually 3,000 gallon tank trucks and clearance is very low. If there is no access without crossing large water bars, an LZ (landing zone) can generally be found on an alternate area, or perhaps with permission of an adjacent landowner. This needs to be discussed and determined prior to the crew's arrival. The area manager will help with this to ensure proper access.

LZS

The LZs (landing zones) are where the batch truck, crew truck, and helicopter work from, usually located on the tract to be sprayed. However, this area can sometimes be located off the specific tract. This is determined prior to the spray job to ensure entrance to the spray site. In the case of a helicopter LZ, several factors are examined. The pilot needs plenty of clearance up and away from the batch truck, to depart from and land on. The helicopter will land directly on top of the batch truck to be refilled with a new load. A load will consist of 10 acres at a time, if a 10 gallon per acre mix is being used. If 15 gallons per acre (gpa) is prescribed, then the load will be a little over 6 acres. If the tract is a perfect 100 acres at 10 gpa, then the helicopter will take off and land 10 times. This is why the LZ needs to be accessible on all sides of the batch truck. If large standing trees are in the way, sometimes a chainsaw will be used to fell the trees to allow good access. Also, if an LZ is located on adjacent property, a good ferry length for the helicopter is less than one half mile. It's important to know where potential LZs could be located, either on your property or with the permission of an adjacent landowner.

COSTS

What is the cost for these types of large-scale applications? That is one of the most common questions that landowners have. Costs are hard to determine without a site inspection and all the pertinent information about the type of treatment. Therefore, each tract is assessed and a cost given at that time. Should a landowner commit to a large-scale application on their property, the area manager will visit the site and discuss all the possible options. If the landowner has a forester that will handle the application, then the forester can make the necessary arrangements to have the site visited and cost projections can be discussed.

SUCCESSFUL APPLICATIONS

Whether you are deciding between a small-scale application or a large one, one factor remains vital . . . that your application is a success. As each landowner has his or her own set of objectives, applications may vary. Some areas may need both large and small-scale applications. Should you need help deciding what to do, seek assistance and ask questions. Each day, landowners are considering different techniques and methods to achieve their objectives. Answers are available, so don't hesitate to ask. No matter which road you choose, make your herbicide applications easy for you, and make them a part of your successful forestry legacy!